

Maximal regularity and nonlinear PDE

Date : March 26-30, 2019

Venue : Research Institute for Mathematical Sciences (RIMS), Kyoto University,
Kyoto, Japan

<http://www.ims.sci.waseda.ac.jp/mrnp2019/index.html>

Program

26 Tuesday, March

9:20–10:05 Herbert Amann (University of Zürich)

Linear and nonlinear parabolic equations on Riemannian manifolds

10:05–10:50 Yoshihiro Shibata (Waseda University)

Global well-posedness of two phase problem for the Navier-Stokes equations

Coffee Break

11:00–11:45 Rico Zacher (University of Ulm)

Linearized stability for abstract quasilinear parabolic problems with a fractional time derivative

11:45–12:30 Toshiaki Hishida (Nagoya University)

Decay estimates of gradient of the evolution operator arising from time-dependent rigid motions in exterior domains

Lunch break

13:45–14:30 Lutz Weis (Karlsruher Institute of Technology)

Regularity theory for stochastic parabolic evolution equations

14:30–15:15 Hi Jun Choe (Yonsei University)

TBA

Coffee Break

15:30–16:15 Yasushi Taniuchi (Shinshu University)

Some logarithmic inequalities and the Navier-Stokes equations

16:15–17:00 Dongho Chae (Chung-Ang University)

On the Liouville type theorems for the stationary Navier-Stokes equations

Special evening session 1

19:00–20:30 Wolfgang Arendt

On the evolution equation

Special evening session 2

19:00–20:30 Lutz Weis

On operator-valued multiplier theorem and its application to R -boundedness of the resolvent

27 Wednesday, March

9:20–10:05 Giuseppe Da Prato (Scuola Normale Superiore, Pisa)

Maximal L^2 regularity for Dirichlet problems in open sets of Hilbert spaces

10:05–10:50 Giusy Mazzone (Vanderbilt University)

On the inertial motion of a fluid-filled rigid body with partial-slip boundary conditions

Coffee Break

11:00–11:45 Yoshiyuki Kagei (Kyushu University)

Stability of spatio-temporal periodic states of the compressible Navier-Stokes equations

11:45–12:30 Jan van Neerven (Delft University of Technology)

The Weyl calculus for group generators satisfying the canonical commutation relations

Lunch break

13:45–14:30 Wolfgang Arendt (University of Ulm)

Lions problem: maximal regularity for non-autonomous evolution equations

14:30–15:15 Hideyuki Miura (Tokyo Institute of Technology)

Local energy weak solutions for the Navier-Stokes equations in the half-space

Coffee Break

15:30–16:15

Contributions of Jan Prüss to Maximal Regularity I

16:15–17:00

Contributions of Jan Prüss to Maximal Regularity II

18:30–20:30 Reception:

Fortune Garden Kyoto

<https://www.fortunegarden.com/>

28 Thursday, March

9:20–10:05 Yoshikazu Giga (University of Tokyo)

On convergence of approximation for the Navier-Stokes equations with anisotropic viscosity by the primitive equations in L^p

10:05–10:50 Yasunori Maekawa (Kyoto University)

On Finn's starting problem for the two-dimensional Navier-Stokes flows

Coffee Break

11:00–11:45 Mathias Wilke Martin (University of Halle)

Critical spaces and maximal regularity for parabolic evolution equations: theory and applications

11:45–12:30 Mark Veraar (Delft University of Technology)

Vector-valued Sobolev spaces with boundary conditions

Lunch break

13:45–14:30 Pascal Auscher (Centre National de la Recherche Scientifique Amiens)

On temporal regularity of solutions of linear parabolic systems

14:30–15:15 Robert Denk (University of Konstanz)

Maximal L^p -regularity for a fluid-structure interaction model

Coffee Break

15:30–16:15 Taku Yanagisawa (Nara Women's University)

On the spaces of harmonic L^r -vector fields over exterior domains

16:15–17:00 Michael Ruzicka (University of Freiburg)

Convergence of fully discrete approximations for nonlinear parabolic equations

Special evening session 3

19:00–20:30 Herbert Amann (University of Zürich)

On the maximal regularity theorem

Special evening session 4

19:00–20:30 Giuseppe Da Prato (Scuola Normale Superiore, Pisa)

On linear and quasilinear parabolic equations

29 Friday, March

9:20–10:05 Atsushi Yagi (Osaka University)

Maximal regularity for abstract parabolic evolution equations and applications

10:05–10:50 Amru Hussein (Technical University of Darmstadt)

Partial and full hyper-viscosity for Navier-Stokes and primitive equations

Coffee Break

11:00–11:45 Takayuki Kobayashi (Osaka University)

Global existence and time decay estimate of solutions to the compressible Navier-Stokes-Korteweg system under critical condition

11:45–12:30 Giorgio Metafuno (University of Salento)

Rellich inequalities in bounded domains

Lunch break

13:45–14:30 Takayoshi Ogawa (Tohoku University)

Maximal regularity for the Cauchy problem for the Stokes system in BMO

14:30–15:15 Piotr Bogulsaw Mucha (University of Warsaw)

The incompressible Navier-Stokes equations in vacuum

Coffee Break

15:30–16:15 Ryo Takada (Kyushu University)

Strongly stratified limit for the 3D inviscid Boussinesq equations

16:15–17:00 Reinhard Farwig (Technical University of Darmstadt)

Incompressible nonhomogeneous fluids in bounded domains of \mathbb{R}^3 with bounded density

30 Saturday, March

Free discussion

Organizers

Matthias Hieber (Technical University of Darmstadt)

Hideo Kozono (Waseda University, Tohoku University)

Senjo Shimizu (Kyoto University)

Gieri Simonett (Vanderbilt University)